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THE EFFECT OF COMMODITY SUPERCYCLE AND DOMESTIC MARKET OBLIGATION ON PROFITABILITY RATIO (NET PROFIT MARGIN, RETURN ON ASSET) CASE STUDY ON COAL MINING ISSUERS IN INDONESIA STOCK EXCHANGE

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ABSTRACT

The Covid-19 pandemic has resulted in economic paralysis due to the economy and human mobility. This resulted in demand for commodities that occurred simultaneously with conditions that were already improving, causing the supply to be unable to meet demand because the world's industrialized countries continued to boost their economic activities. This led to a very large demand for commodities, opening up coalescing commodities in general which soared simultaneously and formed a super cycle in commodities. Coal commodities that occur very quickly are certainly very profitable for coal mining companies. Based on the results of the regression in the study, it shows an increase in the reference price of coal which in this study uses the price of coal at Newcastle Port. It can be seen that one point of increase in the price of coal will affect an increase of 0.173 in return on assets and 0.111 in the net profit margin of coal mining issuers listed on the Indonesia Stock Exchange. The influence of the independent variable supercycle commodities, which in this study uses coal samples and the Domestic Market Obligation (DMO) policy, proved to have an effect and positive value on the dependent variable.

Keywords: Asset Returns, Commodity Supercycle, Domestic Market Bonds, Net Profit Margin, Pandemic.

INTRODUCTION

The latest world economic growth has begun to recover after being hit by the COVID-19 storm. Covid-19 has forced all countries in the world to limit human mobilization and even carry out lockdowns and various regional isolation policies to ensure that health factors are the first priority that must be focused first. According to (Laing, 2020) the global pandemic Coronavirus 2019 (Covid-19) has not only caused infections and deaths but has wreaked havoc on the global economy on a scale that has not been seen at least since the Great Depression. Covid-19 has the potential to destroy the livelihoods of individuals, businesses, industries, and entire economies. The mining sector has not been spared either, and the crisis has the potential to have severe consequences in the short, medium, and long term for the industry.

The simultaneous world economic recovery that occurred in almost all parts of the world was driven by China, which was the initial epicenter of Covid-19 and also India as one of the largest economies in Asia, created a very high demand for commodities to boost economic recovery in the country. The very large and simultaneous demand by the big countries in the world is an effort to boost economic recovery so that it will result in a faster increase in commodity prices in general, be it energy commodities such as oil, gas and coal, metal commodities such as copper, nickel, tin, etc. This includes plantation commodities such as CPO and pulp and various other agricultural commodities. This causes many commodity prices to experience an all-time high, for example, the price of copper, tin, coal, and also CPO.

The rapid increase in prices driven by the demand side seems to be a sign of the start of a large cycle in commodities known as the commodity supercycle. According to Erten Bilge and Ocampo Jose Antonio (2012), a super cycle is different from price fluctuations in the short term which are only limited to microeconomic factors. Super cycles can be observed in two ways, the first one has a tendency for a longer time span of 10-35 years which results in a time of 20-70 years for the completion of the cycle. Second, if we look at various types of commodities, most of the increase in commodities that are inputs for industrial production and urban development comes from developing

economies. For example, the economic growth of the United States in the late nineteenth to early twentieth centuries has resulted in a sustained and prolonged super-cyclical expansion of commodity prices.

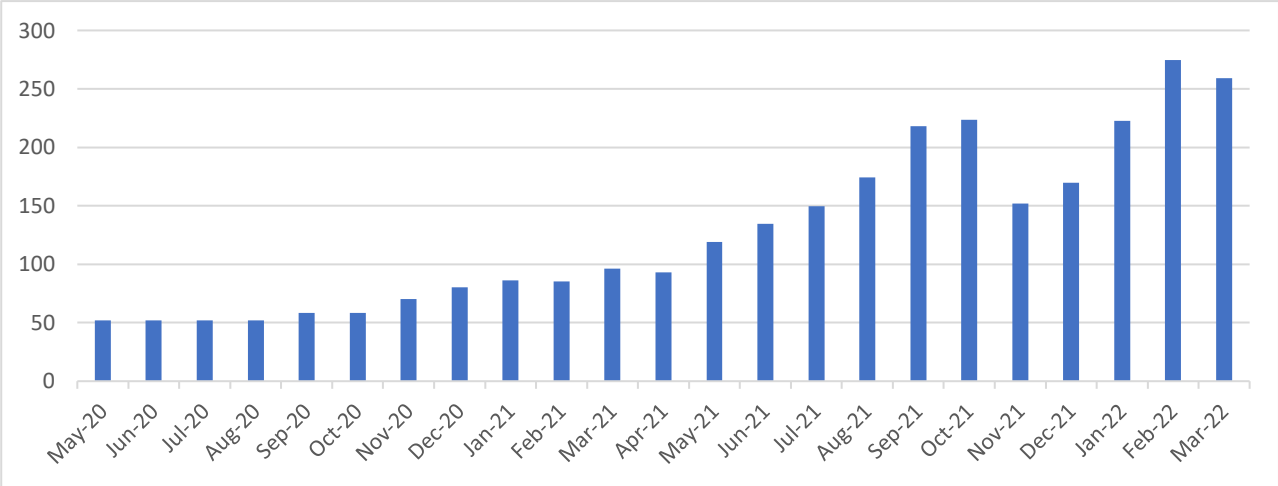

Figure 1. World Coal Price (Ice Newcastle Price)

From Figure 1, we can see how the world's coal prices are based on the reference price of Newcastle Port, Australia. The price of coal since the beginning of the Covid-19 pandemic has increased by more than 300%. Of course, this increase is very beneficial for coal producers. While commodity producers, especially coal producers, enjoy the commodity supercycle which causes coal prices to soar, electricity producers, in this case, PLN, who still uses coal in the national electricity supply, feel very burdened by the higher coal prices, automatically increasing the cost of electricity production. The PLN only has two options; the first is to increase the basic price of electricity and the second is to ask for a stimulus from the government in an effort to save the company so that the company can produce at the same electricity selling price.

Seeing this, the government through the Ministry of Energy and Mineral Resources issued a ministerial decree, namely (KepMen ESDM No. 1395 K/30/MEM/2018) which stipulates the price for providing electricity to the community, which is set at USD 70 per metric ton Free On Board (FOB) Vessel. It uses a reference with a calorie specification of 6,322 kcal/kg GAR, 8% Moisture, 0.8% Sulfur, and 15% Ash. In addition to these provisions, coal producers also have a sales obligation of 25% of their annual coal production plans to meet the stipulated DMO.

From the description above, the researcher wants to make a study that will see the extent of the influence on coal mining-producing companies from the increase in coal in the commodity supercycle phase on net profit margins and return on assets of coal-producing companies listed on the IDX.

LITERATURE REVIEW

Commodity Supercycle

Commodity Supercycle according to Cuddington and Jarret (2008) supercycle on commodities is a "super" cycle, in which prices increase in various commodities in the long run for a total duration of between 10-35 years but can also be in a longer duration of 20-24 years, even 70 years by assuming a phase of expansion and contraction. This happens to various kinds of commodities, be it in metal commodities, energy, agriculture, etc.

Domestic Market Obligation

The Domestic Market Obligation (DMO) policy was first issued through the Minister of Energy and Mineral Resources Regulation No. 34 of 2009. It is explained in (PerMen ESDM No. 39 of 2009) that

the purpose of granting Domestic Market Obligations is to overcome the problem of the limited supply of minerals and coal in the country, thereby ensuring the availability of supplies for domestic needs and interests. In the Minister of Energy and Mineral Resources Regulation No. 39 of 2009 it is explained that the reference price for minerals uses the prevailing international price index a reference price.

The policy regarding Domestic Market Obligations was then updated with the Minister of Energy and Mineral Resources Decree No. 1395 K/30/MEM/2018 which sets a price of USD 70 per metric ton Free On Board (FOB) Vessel, which is based on a reference specification of 6,322 kcal/kg GAR, Moisture 8%, Sulfur 0.8% and Ash 15%, and also the obligation to sell 25% of the coal producer's annual production plan.

Net Profit Margin (NPM)

According to Jumingan (2014), the net profit margin is a comparison of operating profit with sales. This ratio shows that a good company's profitability can be interpreted that it is good for the company. Meanwhile, according to Henry (2015), the net profit margin ratio describes the level of company efficiency, namely the company's ability to reduce its operational costs in a certain period. The larger the net profit margin ratio, the better, because the ability to generate profits through sales is quite high and the ability to reduce costs is very good, and vice versa.

Return on Assets (ROA)

According to Heri (2015), ROA is an important aspect of a comprehensive financial analysis technique. This ratio measures the effectiveness of the company on the overall assets used in generating profits. Meanwhile, according to Tandelin (2010), Return on Assets (ROA) is economic profitability which is a measure of the company's capacity to generate profits with assets owned.

METHODOLOGY

The method used is data collection through a literature study. A literature study is a technique of obtaining information through notes, literature, and other documentation. The data used in this study is secondary data obtained from the quarterly financial statements published on the Indonesia Stock Exchange website. Indo Tambangraya Megah Tbk., PT. Bukit Asam Tbk, PT. Adaro Energy Indonesia Tbk., and PT. Mitrabara Adiperdana Tbk. The data analysis technique used in the study used panel regression analysis using the Statistical Product and Service Solutions (SPSS) software analysis tool.

ANALYSIS AND DISCUSSION

Regression Analysis Statistical Test Results

Coefficient of determination (R2)

The coefficient of determination (R2) is used to measure the extent to which the model can explain the variation of the dependent variable. The value of the coefficient of determination is zero to one. A small value (R2) indicates the extent to which the ability of the independent variables in explaining the dependent variable is very limited and cannot explain well. While the value (R2) is getting closer to one, it can be interpreted that the independent variables can provide almost all the information needed to predict the variation of the dependent variable, or with other independent variables in the model can explain very well the variation of the dependent variable.

Table 1. Coefficient of Determination Statistical Test Results (R2)

ROA		NPM	
R-squared	0.126	R-squared	0.656
Adjusted R-squared	0.105	Adjusted R-squared	0.648

Simultaneous Significance Test (F Test)

Testing on the effect of all independent variables in the study can be done using the F statistical test, the F statistical test shows whether all independent variables in the study have a joint influence on the dependent variable.

Table 2. Anova Test Results

ROA		NPM	
F	6.041	F	80.158
Sig.	0.018	Sig.	0.000

Regression Analysis

The t-statistical test shows how much influence the individual independent variables have in explaining the dependent variable

Table 3. Regression Estimation Results

ROA		NPM	
Model	**B**	**Model**	**b**
Constant (a)	3.880	C	4.924
Coal Price	0.173	Coal Price	0.111

Discussion

Effect of Commodity Supercycle (Coal Price) on Return on Assets (ROA)

Coefficient of determination interpretation (R2)

Model 1: Coal Price Path to Return on Assets (ROA)

The R2 value generated from the first regression model shows a value of 0.126. The indication is that the dependent variable in model one can be explained by 12.6% by the diversity of the independent variables. This means that the independent variables can actually be explained better by the independent variables that were not used in this study.

Interpretation of Anova Test Results

Model 1: Coal Price Path to Return on Assets (ROA)

The F value generated from the first regression model is known that the calculated F value = 6.041 with a significance level of 0.000 < 0.05 so that the regression model can be used to predict the Return on Assets variable or in other words there is an influence from the independent variable (Coal Price) on the dependent variable. (Return on Assets).

Interpretation of Regression Estimation Results

Model 1: Coal Price Path to Return on Assets (ROA)

The regression coefficient in the first model is between the independent variables (Coal Price) and the dependent variable (Return on Assets). From the regression results, we can see that the coal price coefficient which describes the independent variable has a coefficient value of 0.173. The interpretation is that every 1-point increase in the independent variable (Coal Price) will cause an increase in the dependent variable (Return on Assets) of 0.173. The regression coefficient is positive, so it can be said that the direction of the influence of the independent variable (Coal Price) on the dependent variable (Return on Assets) is positive.

Effect of Commodity Supercycle (Coal Price) on Net Profit Margin (NPM)

Coefficient of determination interpretation (R2)

Model 2: Coal Price Path to Net Profit Margin (NPM)

The R2 value generated from the second regression model shows a value of 0.656. The indication is that the dependent variable in model one is explained 65.6% by the diversity of the independent variables. This means that the independent variable can be explained well by the independent variable.

Interpretation of Anova Test Results

Model 2: Coal Price Path to Net Profit Margin (NPM)

The F value generated from the regression is known that the calculated F value = 80,158 with a significance level of 0.000 < 0.05, so the regression model can be used to predict the Return on Assets variable or in other words there is an influence from the independent variable (Coal Price) on the dependent variable (Return on Assets).

Interpretation of Regression Estimation Results

Model 2: Coal Price Path to Net Profit Margin (NPM)

From the regression results, we can see that the coal price coefficient which describes the independent variable has a coefficient value of 0.111. The interpretation is that every 1-point increase in the independent variable (Coal Price) will cause an increase in the dependent variable (Return on Assets) of 0.111. The regression coefficient is positive, so it can be said that the direction of the influence of the independent variable (Coal Price) on the dependent variable (Return on Assets) is positive.

CONCLUSIONS AND RECOMMENDATIONS

Based on the results and also the discussion, some conclusions can be drawn as follows:

1. Commodity Supercycle, which in the study became the independent variable by taking a sample of Newcastle Port coal commodity prices, affected the dependent variable (Return on Assets) of coal mining issuers listed on the Indonesia Stock Exchange. After testing, it was found that the regression coefficient results were positive, so it can be said that the direction of the influence of the independent variable (Coal Price) on the dependent variable (Return on Assets) is positive. Everyone point of increase in coal price will affect ROA by 0.173.
2. Commodity Supercycle, which in the study became the independent variable by taking a sample of Newcastle Port coal commodity prices, affected the dependent variable (Net Profit Margin) of coal mining issuers listed on the Indonesia Stock Exchange. After testing, it was found that the regression coefficient results were positive, so it can be said that the direction of the influence of the independent variable (Coal Price) on the dependent variable (Net Profit Margin) is positive. Every one-point increase in coal price will affect ROA by 0.111.

Research Implication

The implications of this research are:

1. For capital market investors, as a reference for investors to project and forecast company performance, especially for coal mining issuers listed on the Indonesia Stock Exchange.
2. For researchers, as a reference for further research, especially to provide repertoire in the world of research.

3. For the public in general, one of the insights that can be taken from the scientific side in the world of coal mining, especially regarding the effect of rising coal commodity prices on the profitability ratios of coal mining companies.

Limitations in Research and Directions for Further Research

The limitation in the research is regarding the stability of the research object data so that in its implementation it will only be able to be effective when in cateris-paribus conditions. Because in reality there are many influencing factors, such as changing government policies, natural factors that interfere with the company's production process, and so on.

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